

(b) synthesizing a chimeric nucleotide coding sequence coding for the expression of the amino acid sequence of the [foreign procaryotic protein] delta-endotoxin with the chimeric coding sequence comprising at least a first 5' 25 codons differing from those in the coding sequence in [the native organism of the protein] Bacillus thuringiensis and selected from among the codons determined to be preferentially utilized by the native plant genes;

(c) joining the chimeric nucleotide coding sequence with flanking regulatory sequences effective to express the chimeric coding sequence in plants; and

(d) transforming the chimeric coding sequences together with the regulatory sequences into the germ line of the dicot plant so that the [foreign] delta-endotoxin protein is [efficiently] produced in cells of the transformed plant so that the plant is toxic upon ingestion to Manduca sexta.

17. (Twice Amended ) A transgenic dicot plant comprising in its genome a gene coding for the amino terminal toxin encoding portion of the delta endotoxin from Bacillus thuringiensis, the gene including appropriate regulatory sequences effective in plant cells to express a coding region so that cells of the plant produce the delta endotoxin toxin protein in sufficient amount to be toxic upon ingestion to Manduca sexta, the coding region of the gene including a synthesized 5' region of between 25 and 132 codons in length constructed from nucleotide sequences selected from those codons determined to be efficiently expressed in the cells of plants and a 3' region comprising the native sequence from Bacillus thuringiensis.

18. (Amended) A transgenic dicot plant comprising in its genome a gene coding for the amino terminal toxin portion of the delta endotoxin gene from Bacillus thuringiensis, the gene including appropriate regulatory sequences effective in plant cells to express a coding region, the coding region having a 5' portion identical to [substantially similar to the portion of] the sequence of BT4 listed as the top sequence in Figure 2 and a 3' portion [substantially similar] identical to the native sequence.